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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,849	03/14/2001	Douglas M. Kavner	RTN-100AUS	3784
22494	7590	06/04/2004	EXAMINER	
DALY, CROWLEY & MOFFORD, LLP SUITE 101 275 TURNPIKE STREET CANTON, MA 02021-2310			LIEU, JULIE BICHNGOC	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/805,849

Applicant(s)

KAVNER, DOUGLAS M.

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on preliminary amendment filed 3/14/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 11, 15-17, 23, 26-28 and 30-36 is/are rejected.
- 7) ☒ Claim(s) 6-9, 12-14, 18-22, 24, 25 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/24/03 x 1/4/02
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This office action is in response to preliminary amendment filed March 14, 01. Claims 18 and 20-22 have been amended.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Hassett et al. (US Patent No. 5289,183).

#### Claim 30:

Hassett discloses an incident detection system comprising:

- a. a traffic management center processor connected to a data network 128;
- b. a plurality of unique vehicle data readers 116, 118, etc...connected to said data network such that uniquely identified data are read from each of a plurality of vehicles;
- c. a correlation processor 116, 118, wherein said uniquely identified data are correlated to obtain a count of overdue vehicles and early arriving vehicles; and
- d. an incident detection processor 128.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-5, 10, 11, 15, 17, 23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassett et al. (US Patent No. 5,289,183) in view of Krause et al. (US Patent No. 5,684,475).

Claim 1:

Hassett et al. discloses a method for detecting incidents along a roadway comprising the unordered steps of:

- a. arranging a plurality of readers at intervals along a roadway for reading uniquely identified data from each of a plurality of vehicles (this is inherent since the system in Hassett is also used for toll collection purpose, col. 3, first paragraph);

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- b. correlating the data with previously read data (i.e. ID) to obtain information on each of the plurality of vehicles.

Hassett fails to disclose determining the number of vehicles potentially affected by incident along the roadway and comparing the number of vehicle potentially affected by incidents to a sample threshold. However, such concept is well known in the art as taught in Krause wherein the number and the speed of the vehicle passing through the measurement cross sections are continuously measured and used a traffic evaluation to determine whether a traffic disruption has occurred. In light of this teaching, it would have been obvious to combine this well-known concept in the system of Hassett because it would allow the system to analyze the traffic condition more accurately.

Claims 2-3:

Probe readers are conventional in the art in detecting vehicles. Therefore, it would have been obvious to one skilled in the art to use probe readers in the combined system of Hassett and Krause as desired. A plurality of readers are used in this combined system.

Claim 4:

The information obtained in Hassett is one of :

- a. a vehicle speed;
- b. an expected vehicle travel time between two adjacent readers; and
- c. an expected arrival time of each of the plurality of vehicles at one of the plurality of readers.

See col. 4, lines 19-43.

Claim 5:

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The step of determining the number of vehicle potentially affected by an incident further comprises the step of determining the expected time for each of the plurality of vehicles to be detected by a particular one of the plurality of readers. See fig. 1.

Claim 10:

The combined system detects an incident in response to the number of each of the plurality of vehicles potentially affected by an incident exceeding the predetermined sample threshold. Col. 7, lines 34-40.

Claim 11:

In the combined system, each of the plurality of vehicles potentially affected by incident is overdue at one of the plurality of readers.

Claim 15:

The plurality of readers in Hassett comprises transponders reader.

Claim 17:

In the combined system of Hassett and Krause, an instantaneous speed of each of the plurality of vehicles is determined by either the vehicle or the management center, which is a toll gateway sensor.

Claim 23:

The system in Hassett and Krause declares an incident in response to the number of each of plurality of vehicles potentially affected by incidents being greater than the sample threshold.

Claim 26:

Though none of the references discloses or teaches the step of suppressing the detection of an incident in a roadway segment where the number of vehicles exiting the segment of the

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roadway on an off-ramp over a predetermined interval of time exceeds a predetermined threshold, one skilled in the art would have readily known to suppress the detection as desired. This is only a matter of choice in design.

4. Claims 27-28 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassett et al. (US Patent No. 5289,183).

Claim 27:

Hassett discloses a method for detecting incidents along a roadway comprising the unordered steps of :

- a. arranging a plurality of traffic readers at intervals along a roadway for reading a transponder disposed on a vehicle;
- b. correlating the transponder readings from each of the plurality of vehicles and expected readings from each of the plurality of vehicles at more than one traffic probe reader;
- c. and detecting incidents which result in an interruption to the flow of traffic.

Probe readers are conventional in the art in detecting vehicles. Therefore, it would have been obvious to one skilled in the art to use probe readers in the combined system of Hassett and Krause as desired. A plurality of readers are used in this combined system.

Claim 28:

The system of Hassett further comprises the step of writing time and location data into the transponder of each of the plurality of vehicles. Col. 4, lines 19-39.

Claim 31:



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The plurality of unique vehicle data readers further comprise a plurality of traffic readers, each of said plurality of traffic readers having an automatic vehicle identification readers, and a plurality of toll gateways, each of said plurality of toll gateways having an automatic vehicle identification reader. Probe readers are conventional in the art in detecting vehicles. Therefore, it would have been obvious to one skilled in the art to use probe readers in the combined system of Hassett and Krause as desired. A plurality of readers are used in this combined system.

Claim 32:

The system of Hassett includes roadside toll collection devices coupled to said plurality of toll gateways, the plurality of traffic readers, and said traffic management center, such that the volume of data transmitted to said traffic management center is minimized.

Claim 33:

The correlation processor 116 is connected to the traffic management center processor.

Claim 34:

The correlation processor 116 is connected to said roadside toll collection device.

Claim 35:

The incident processor 128 is connected to the traffic management center processor 128.

Claim 36:

The incident processor 128 is connected to said roadside toll collection device.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hassett et al. (US Patent No. 5289,183) in view of Krause et al. (US Patent NO. 5,684,475) and Kamata (US Patent No. 5,422,473).

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Claim 16:

Neither Hassett nor Krause disclosed the plurality of readers comprises a license plate reader. Nonetheless, the use of license plate readers as vehicle detectors, especially in toll system is old in the art as taught in Kamata. In light of this teaching, it would have been obvious to one skilled in the art to use license plate readers as readers in the combined system of Hassett and Krause as desired because they are conventional in the art.

*Allowable Subject Matter*

3. Claims 6-9, 12-14, 18-22, 24-25, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 703-308-6738. The examiner can normally be reached on MaxiFlex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Hofsass can be reached on 703-305-4717. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Julie Lieu  
Primary Examiner  
Art Unit 2636

May 30, 04